(Continued from page 3)
1949 and has roots to the early 1900s, is a monthly estimate -- by industry -- of employment, hours and earnings of all nonagricultural employees. Among its data series -- some of which are seasonally adjusted -- are: employment data on all employees, women workers, and production or nonsupervisory workers; and average weekly hours, average weekly overtime hours, and average hourly and weekly earnings. (Note: Some of these data are only published on a national basis.)

Despite the fact the CES program has been around 40 years, its value has not diminished, says Vic Conti, CES/LAUS Section supervisor, who has worked with these two LMI programs and the state since 1973.

"To judge the economic state of an area, you have to look at CES as a prime component -- it has bearing on other indices," Conti says, adding that CES is the largest monthly survey program in the world with data from 330,000 U.S. establishments (4,000 in Arizona).

Another reason for CES' importance, Conti says, is it "gives individual industry breakdowns that show patterns of strength and weakness." In turn, knowing the status of individual industries can help to forecast future trends, he says, because "to look at the evolution of an economic cycle, you know certain industries will lead others out of recessions."

In Arizona, the CES survey measures data from four areas -- the Phoenix and Tucson Metropolitan Statistical Areas (Maricopa and Pima counties), and northern and southern counties (excluding Pima and Maricopa counties). CES data are further reduced, or broken out, into nine major industry categories (e.g., manufacturing), and in the case of the state and major metropolitan areas, are again fragmentized to show specific industry sectors (e.g., primary metals manufacturing).

Data for the CES survey is collected each month from a variety of different-sized companies -- as determined by BLS -- in all major industry groups. These companies are asked to fill out BLS survey form (790), which includes payroll information on employees who worked during the pay period that included the 12th of the month, and mail it to the CES section.

The section's three clerical staff -- Supervisor Charlene Markstrom, Doris Llewellyn and Joan Woods -- are then responsible for "the front-end work" of the survey, Conti says -- editing and inputting monthly data, breaking out the county reports, then distributing the resulting data (to the public and BLS), and maintaining reports.

On the back-end then are research analysts Mark Hope, Leonard Heinrich and Bert Cisneros, who are responsible for interpreting the sample data and making employment estimates. The analysts weigh the data against seasonal growth, historical data, and second sources (newspaper, magazine articles) -- to come up with their monthly evaluations.

(Continued on page 5)

Disclosure Rules

CES and ES-202 Data

Data cannot be released without written consent if one of the following are true:

1) Fewer than three companies in the industry.
2) One company has 80 percent or more of the industry's employment.

OES Data

Data cannot be released without written consent if one of the following are true:

1) Fewer than three companies in the industry.
2) One company has 50 percent or more of the industry's employment.
3) Two companies have 75 percent or more of an occupation's employment.

Figure 3.

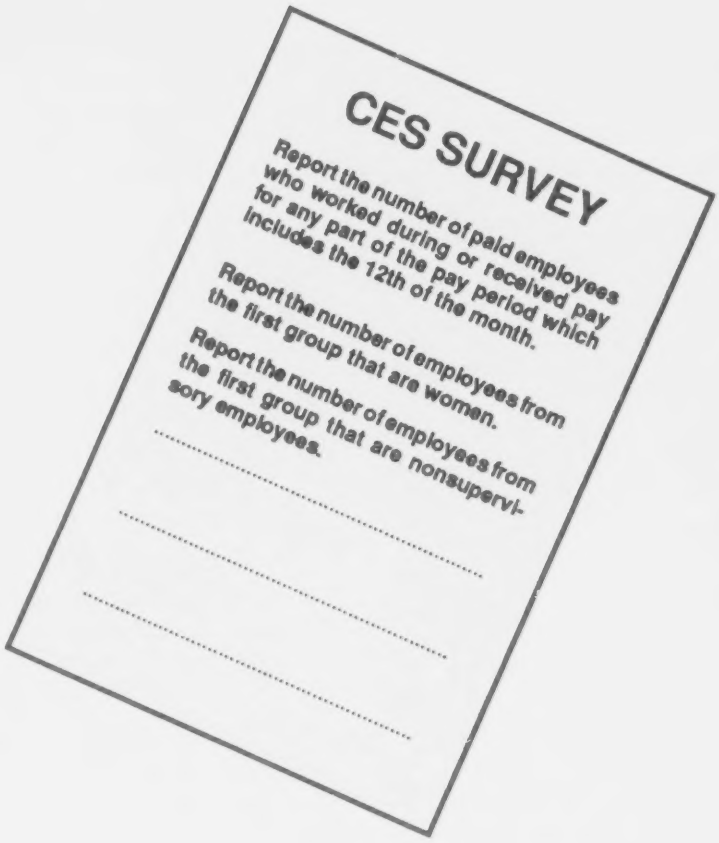
(Continued from page 4)
In March of each year, the previous year's CES survey estimates are checked for accuracy through a process called benchmarking. CES data are compared against quarterly UI reports (see ES-202 Section) and other sources, then adjusted accordingly.

The LAUS program had its beginning during and after World War II as a way to track labor surplus areas. But it wasn't until 1972 that BLS was assigned the responsibility of developing a method for states to estimate data on their labor force, employment and unemployment, as a way to help government in its planning and budgeting, and to determine the eligibility of an area for benefits in federal assistance programs.

Since 1973, BLS has aided less-populated states (now 39), including Arizona, in estimating state and county employment and unemployment data.

(Unemployment rates for the 11 most populous states are determined through the monthly Current Population Survey (CPS) -- conducted by the U.S. Census Bureau -- which samples 70,000 scientifically selected households across the country.)

The LAUS program provides estimates on total employment and unemployment, as well as the unemployment rate at the state, county and city level. Its employment and unemployment totals, however, differ from the CES survey, in that its estimates are by place of residence, while CES estimates are by place of work.


CES SURVEY
Report the number of paid employees who worked during or received pay for any part of the pay period which includes the 12th of the month.
Report the number of employees from the first group that are women.
Report the number of employees from the first group that are nonsupervisory employees.

So, for example, someone living in Bullhead City and working in Laughlin, Nev., would be included in the state's LAUS estimates because they live in Arizona, but would not be included in the state's CES estimates. The reverse would be true when Nevada estimates CES and LAUS data.

LAUS data are estimated using a variable-coefficient regression method, which uses two estimating models (one for employment and another for unemployment) that automatically adjust to structural changes in each state's economy. Some of the variables that go into determining the monthly estimates are data from the

(Continued on page 6)

(Continued from page 5)
CES and CPS surveys, unemployment insurance claims, agricultural workers, population, labor force entrance rates, and seasonal variables.

Prior to this year, estimates for the less-populated (nondirect-use) states were derived from the "Handbook" method, a building-block approach that was heavily weighted by UI data. But as the percentage of unemployed who collect unemployment insurance declined, the Handbook method became less reliable and was superseded at the state level. (See "BLS Revises Method for Estimating Employment, Unemployment Rates," *Arizona Labor Market Information Newsletter*, February 1989).

To economic forecasters and government agencies, ES-202 is a veritable supermarket of information that "has broad economic significance in evaluating labor trends and major industry developments ... "

--BLS Handbook of Methods

Upon completion of the CES and LAUS surveys each month, results are sent to BLS in Washington. In Arizona, data from these programs are issued to the public on the 13th working day of the month (usually around the 20th calendar day) through press releases and at press conferences in Phoenix (every month) and Tucson (every other month).

ES-202 Section

Created as a reporting system to ensure states were in compliance with the Social Security Act of 1935, the Employment and Wages Program, also known as ES-202, issues quarterly reports -- national, state, and local -- summarizing employment and wage data for workers covered by UI laws.

To economic forecasters and government agencies, ES-202 is a veritable supermarket of information that "has broad economic significance in evaluating labor trends and major industry developments ... ."[1] ES-202 data are used by a variety of BLS programs -- including as mentioned the benchmarking of CES data -- as well as a host of other federal and state agencies, private businesses and the general public.

When the ES-202 program started a half-century ago, only private companies with eight or more persons working at least 20 weeks a year were required to file reports. Today, the ES-202 reports accumulate data on about 90 percent of the work force and 94 percent of the wage and salary component of personal income.

In Arizona, that translates into more than 80,000 employers who are required to submit UI tax reports, says ES-202 Section Supervisor Mickey Gamez. And like the CES program, Gamez' five-member staff uses a two-prong approach to prepare the ES-202 report, which includes, on a state and county basis: number of employers and employees, total wages, and percent distribution of wages.

When raw data come in from the state's UI tax files, Gamez and two research and statistical analysts, Dennis Efird and Mike Wade, perform a micro edit -- analyzing the data for fluctuations and seasonal trends, and estimating missing or correcting erroneous employment and wage figures.

Upon completion of the micro edit, a macro edit is conducted. The research and statistical analysts,

(Continued on page 7)

ARIZONA DEPARTMENT OF ECONOMIC SECURITY
UI RESEARCH AND REPORTS SECTION
07/10/89

TABLE 1
EMPLOYERS, EMPLOYEES AND TOTAL WAGES WITH PERCENTAGES OF TOTALS BY COUNTY

FOURTH QUARTER (OCT NOV DEC) 1988

INDUSTRY	SIC		EMPLOYERS	EMPLOYEES OCT	EMPLOYEES NOV	EMPLOYEES DEC	TOTAL WAGES	AVERAGE WEEKLY WAGES	PERCENT DISTRIBUTION EMPLOYEES	PERCENT DISTRIBUTION WAGES
TOTAL - ALL SECTORS			80,479	1,481,374	1,474,737	1,483,579	7,844,802,590	408.64	100.0	100.0
TOTAL PRIVATE INDUSTRY AND STATE AND LOCAL GOVERNMENT **			80,178	1,416,857	1,430,218	1,448,586	7,551,493,948	405.67	97.0	96.3
TOTAL - PRIVATE INDUSTRY **			79,007	1,202,748	1,215,250	1,233,854	6,375,840,418	402.79	82.5	81.3
TOTAL - STATE AND LOCAL GOVERNMENT **			1,171	213,108	214,968	214,732	1,175,653,530	422.05	14.5	15.0
TOTAL - FEDERAL GOVERNMENT			301	64,517	64,519	64,993	293,308,641	505.05	3.0	3.7
PRIVATE INDUSTRY										
AGRICULTURE, FORESTRY, FISHING	01	-09	2,557	39,341	39,470	42,551	117,229,014	230.80	2.6	1.5
MINING	10	-14	387	12,178	12,006	12,074	113,493,284	732.34	0.8	1.4
CONSTRUCTION	15	-17	10,168	84,718	83,330	83,337	508,408,120	417.79	6.4	6.5
MANUFACTURING	20	-39	4,410	192,478	192,353	192,637	1,389,637,703	555.32	13.0	17.7
TRANSPORTATION, COMMUNICATIONS ELECTRIC, GAS AND SANITARY SERVICES	40	-49	2,600	66,164	66,428	67,047	437,388,068	508.59	4.5	5.6
WHOLESALE TRADE	50	-51	7,594	69,196	70,329	71,758	449,609,555	491.07	4.8	5.7
RETAIL TRADE	52	-59	14,672	283,797	288,200	296,810	887,242,641	235.74	19.6	11.3
FINANCE, INSURANCE, REAL ESTATE	60	-67	7,880	94,647	94,741	95,708	595,846,980	482.30	6.4	7.6
SERVICES	70	-89	28,739	355,152	358,306	362,197	1,875,707,988	402.42	24.3	23.9
PUBLIC ADMINISTRATION	90	-97	0	0	0	0	0	.00	0.0	0.0
ALL OTHER INDUSTRIES NOT SPECIFIED			110	79	87	84	279,097	257.63	0.0	0.0

*INDUSTRY DATA CAN NOT BE DISCLOSED
**COVERED BY ARIZONA EMPLOYMENT SECURITY LAWS

Figure 4. Page From ES-202 Quarterly Report

(Continued from page 6)
working at a more detailed industry level (e.g., restaurants), use a computer program to screen data elements for validity and consistency. In addition, comment codes are added to explain fluctuations in data.

Altogether, it takes about two months to complete the editing process. Raw data for each quarter's report are received about four months after the quarter, with the ES-202 Section releasing final reports about six months after the quarter ends. Upon completion of the report, the results are forwarded to BLS in Washington.

While data are being compiled for the ES-202 reports, research and statistical analysts Joan Adair and Benester Reagan are assigning new and verifying current industrial and geographic codes to all employers covered by UI laws in Arizona. Industrial and geographic codes are used by DES for UI program purposes; by DES and BLS in compiling economic statistics for local areas, the state, and nation; and by government and the private sector for economic analysis and planning purposes.

Adair and Reagan are also responsible for an annual refiling survey, which verifies and updates previously assigned codes. And another member of the ES-202 staff, Cindy Traslavina, a research and statistical assistant, takes special data requests and assists with special projects.

All told, the ES-202 Section currently puts out six reports each quarter that are used by other federal and state programs. In addition, ES-202 is responsible for a new report called the Business Establishment List (BEL), which will collect more specific information on local businesses, but also increase the unit's workload by 50 percent, Gamez says.

OES Section

Future workers, guidance counselors, employers and government agencies are some of the beneficiaries of the

(Continued on page 8)

(Continued from page 7)
Occupational Employment Statistics (OES) survey, conducted by the Data Systems' section with the same name.

Started by the U.S. Employment and Training Administration in 1971 and subsequently taken over by BLS, the OES survey estimates occupational totals for nonfarm establishments on a national, state and local-area basis.

The OES survey samples three industrial sectors on a yearly rotating basis: (1) manufacturing and hospitals; (2) nonmanufacturing (finance, insurance and real estate (FIRE); construction; mining; and services); and (3) balance of nonmanufacturing (transportation, communications and public utilities (TCPU); trade; educational services; and government). In Arizona, that equates to about 2,500 manufacturing units, 6,500 nonmanufacturing units, and 6,500 businesses in the "balance of nonmanufacturing" category.

Employment information for the survey is collected on about 750 occupations. An OES list of occupations has been designed for each industry or for each group of industries having a similar occupational structure.

Business establishments, classified by industry according to the 1987 *Standard Industrial Classification* (SIC) *Manual*, are selected for the survey primarily from the ES-202 data base. All businesses with 250 or more employees are automatically included in a sample group.

BLS uses two survey questionnaires -- one for large employers (50 or more employees) and another for small employers (under 50 employees) -- both of which include specific occupational titles and definitions, establishment identification information, and several questions about the nature of the business. Data are collected from respondents primarily by mail, but telephone calls and personal visits are made to many large employers and to those who have difficulty in completing the questionnaires.

The actual OES survey begins in the late spring of each year and takes several months to complete. But the entire process -- from collecting the data to BLS approval of final estimates -- takes more than a year. While the OES unit is currently in the middle of the 1989 survey, it recently completed its final estimates for the '88 study, and preparation is already under way for the '90 survey.

Thanks to a 90 percent response rate from businesses in the state ... it has made doing the OES survey much easier and increased the probability of accuracy.

-- Cyprian Eboh
OES Supervisor

Including the OES section supervisor, Cyprian Eboh, OES consists of three research and statistical analysts and one clerical support person. Eboh and research and statistical analysts Jeanne Happel and Mark McCain, collect and compile the data, benchmark the data to ES-202 reports, perform technical edits -- using a computer to search for errors and recheck totals -- and make final estimates. Connie Matos, a research and statistical assistant, also helps in data collection.

Thanks to a 90 percent response rate from businesses in the state, Eboh says it has made doing the OES survey much easier and increased the probability of accuracy. "Arizona businesses have been nice to us," Eboh says.

(Continued on page 9)

(Continued from page 8)
For 1989, manufacturing and hospital establishments are being surveyed. But even though there are fewer units to survey than the other two years, it still requires as much time, says Eboh, because typically manufacturing businesses have a greater variety of occupations than other industries.

When OES' final estimates are approved by BLS, the process for Research Administration (RA), however, has not ended. In fact, as far as the public and other interested parties -- students, vocational planners and counselors, and employers -- are concerned, it's just beginning.

RA's Economic Analysis Unit takes the OES data and puts them through a statistical process that yields projections of occupational employment in future years. The results are then shown in two series of RA publications -- the annual *Occupational Employment Forecasts*, which are available on a statewide and county basis; and the *Arizona Occupational Profiles*, which analyze occupations by industry and are published on a three-year rotating basis. Occupational projections are also made available through a statewide data base -- the MICRO OIS -- operated by the Arizona State Occupational Information Coordinating Committee (ASOICC) (*see page 15*).

More information about LMI programs can be found in several BLS publications, which are available free of charge. Contact Research Administration at 542-3871 for specific information.

--Brent Fine
Arizona LMI Newsletter Editor

1. "Chapter 5. Employment and Wages Covered by Unemployment Insurance," BLS Handbook of Methods, p. 39.

The Arizona Labor Force in June

Arizona's unemployment rate for June rose moderately from 5.0 percent to 5.2 percent, after seasonal adjustment partially dampened the effect of an added 18,400 unemployed.

Seasonal adjustment anticipates a normal increase in unemployment from May to June as students end the spring semester and search for summer jobs. The increase of 18,400 unemployed was more than the average monthly increase of 11,800 since 1982. On the other hand, 30,100 fewer residents were employed in June, causing the labor force to shrink by 11,700.

The number of payroll jobs declined as expected in June. A total of 30,900 payroll jobs were lost, of which all but 1,400 were normal seasonal losses in Government, mostly in schools. In Trade and Services, the state's central and southern counties recorded seasonal employment losses (3,400). On the positive side, healthy summer tourism activity in the state's northern counties helped to overcome these losses somewhat by adding about 1,400 jobs.

In Construction, some encouraging signs were noted, with 600 jobs added in June, on top of 900 added in May. Most of that growth (350) came from the state's northern counties.

Manufacturing employment held steady at its May level of 189,600. However, the machinery sector, which contains many of the state's electronics firms, saw employment fall by 300 to 64,100. A weak book-to-bill ratio for the semiconductor industry and a preliminary high

(Continued on page 14)

June 1989 (in thousands)

BEST AVAIL

	Arizona				
				Amount Change	
	June* 1989	May 1989	June 1988	May-June	1988-1989
TOTAL CIVILIAN LABOR FORCE**	1729.0	1740.7	1666.8	-11.7	+62.2
Total Unemployment	98.6	80.2	118.0	+18.4	-19.4
Rate	5.7	4.6	7.1	----	----
Rate (Sea. Adj.)***	5.2	5.0	6.4	----	----
Total Employment	1630.4	1660.5	1548.8	-30.1	+81.6
NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK					
TOTAL WAGE AND SALARY	1409.8	1440.7	1391.2	-30.9	+18.6
Manufacturing	189.6	189.6	191.0	+0.0	-1.4
Durable Goods	144.7	145.0	147.6	-0.3	-2.9
Stone, Clay, and Glass	7.6	7.6	7.8	+0.0	-0.2
Primary and Fabricated Metals	15.7	15.8	15.5	-0.1	+0.2
Primary Metals	7.5	7.5	7.4	+0.0	+0.1
Fabricated Metals	8.2	8.3	8.1	-0.1	+0.1
Machinery	64.1	64.4	66.8	-0.3	-2.7
Other Durable Goods	57.3	57.2	57.5	+0.1	-0.2
Aircraft and Missiles	25.5	25.8	26.4	-0.3	-0.9
Lumber and Wood Product (Excluding Furniture)	8.7	8.4	8.4	+0.3	+0.3
All Other Durable Goods	23.1	23.0	22.7	+0.1	+0.4
Nondurable Goods	44.9	44.6	43.4	+0.3	+1.5
Food and Kindred Products	9.7	9.6	9.3	+0.1	+0.4
Apparel	4.6	4.6	4.5	+0.0	+0.1
Printing and Publishing	16.9	16.9	16.7	+0.0	+0.2
All Other Nondurable Goods	13.7	13.5	12.9	+0.2	+0.8
Mining and Quarrying	12.1	12.0	12.1	+0.1	+0.0
Copper Mining	9.1	9.0	9.0	+0.1	+0.1
Other Mining and Quarrying	3.0	3.0	3.1	+0.0	-0.1
Construction	90.7	90.1	94.9	+0.6	-4.2
Trans., Communications, & Public Utilities	72.8	72.6	72.3	+0.2	+0.5
Transportation	37.8	37.5	36.5	+0.3	+1.3
Communications and Public Utilities	35.0	35.1	35.8	-0.1	-0.8
Trade	359.1	360.0	344.9	-0.9	+14.2
Wholesale Trade	69.8	69.6	67.7	+0.2	+2.1
Retail Trade	289.3	290.4	277.2	-1.1	+12.1
General Merchandise and Apparel	44.7	45.0	42.0	-0.3	+2.7
Food Stores	48.1	48.2	46.1	-0.1	+2.0
Automotive and Service Stations	36.0	35.7	34.1	+0.3	+1.9
Eating and Drinking Places	100.6	101.6	97.2	-1.0	+3.4
Other Retail Trade	59.9	59.9	57.8	+0.0	+2.1
Finance, Insurance, and Real Estate	92.0	92.3	93.8	-0.3	-1.8
Services and Miscellaneous	367.7	368.8	360.9	-1.1	+6.8
Hotels and Other Lodging Places	42.3	43.2	40.0	-0.9	+2.3
Business Services	76.7	76.6	77.9	+0.1	-1.2
Health Services	92.3	92.3	91.2	+0.0	+1.1
Other Services	156.4	156.7	151.8	-0.3	+4.6
Government	225.8	255.3	221.3	-29.5	+4.5
Federal	42.4	44.3	43.6	-1.9	-1.2
State and Local	183.4	211.0	177.7	-27.6	+5.7
School	88.5	119.8	88.8	-31.3	-0.3

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

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June 1989 (in thousands)

MARICOPA COUNTY			Amount Change		PIMA COUNTY			Amount Change	
June* 1989	May 1989	June 1988	May-June	1988-1989	June* 1989	May 1989	June 1988	May-June	1988-1989
1078.0	1079.2	1040.4	-1.2	+37.6	326.2	329.7	311.9	-3.5	+14.3
48.7	40.2	58.3	+8.5	-9.6	15.6	12.8	17.5	+2.8	-1.9
4.5	3.7	5.6	---	---	4.8	3.9	5.6	---	---
4.3	4.0	5.3	---	---	4.6	4.2	5.4	---	---
1029.3	1039.0	982.1	-9.7	+47.2	310.6	316.9	294.4	-6.3	+16.2
NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK									
933.1	945.6	922.5	-12.5	+10.6	246.1	252.3	242.0	-6.2	+4.1
139.0	138.8	139.2	+0.2	-0.2	28.7	29.1	30.4	-0.4	-1.7
107.5	107.5	108.6	+0.0	-1.1	22.8	23.2	24.6	-0.4	-1.8
4.8	4.8	5.0	+0.0	-0.2					
10.4	10.5	10.3	-0.1	+0.1					
52.2	52.1	53.3	+0.1	-1.1					
40.1	40.1	40.0	+0.0	+0.1					
31.5	31.3	30.6	+0.2	+0.9	5.9	5.9	5.8	+0.0	+0.1
6.3	6.2	6.1	+0.1	+0.2					
3.5	3.5	3.5	+0.0	+0.0					
11.9	12.0	11.8	-0.1	+0.1					
9.8	9.6	9.2	+0.2	+0.6					
0.9	0.8	0.7	+0.1	+0.2	2.1	2.1	1.8	+0.0	+0.3
60.8	60.8	65.5	+0.0	-4.7	16.8	16.7	17.1	+0.1	-0.3
51.0	50.7	50.0	+0.3	+1.0	9.3	9.3	9.2	+0.0	+0.1
27.6	27.4	26.3	+0.2	+1.3	4.9	4.8	4.8	+0.1	+0.1
23.4	23.3	23.7	+0.1	-0.3	4.4	4.5	4.4	-0.1	+0.0
242.4	243.2	233.9	-0.8	+8.5	58.4	58.4	56.5	+0.0	+1.9
56.3	56.1	54.4	+0.2	+1.9	7.2	7.1	7.0	+0.1	+0.2
186.1	187.1	179.5	-1.0	+6.6	51.2	51.3	49.5	-0.1	+1.7
27.8	28.0	27.1	-0.2	+0.7	7.7	7.8	7.2	-0.1	+0.5
31.1	31.2	29.5	-0.1	+1.6	7.9	7.9	8.0	+0.0	-0.1
23.2	22.9	21.5	+0.3	+1.7	5.6	5.5	5.6	+0.1	+0.0
64.1	64.9	62.3	-0.8	+1.8	18.4	18.6	17.8	-0.2	+0.6
39.9	40.1	39.1	-0.2	+0.8	11.6	11.5	10.9	+0.1	+0.7
73.4	73.7	74.6	-0.3	-1.2	11.7	11.6	11.1	+0.1	-0.6
246.1	247.4	244.1	-1.3	+2.0	69.1	69.3	66.6	-0.2	+2.5
24.5	25.6	23.0	-1.1	+1.5	6.8	7.0	6.5	-0.2	+0.3
60.3	60.1	61.6	+0.2	-1.3	11.2	11.2	11.4	+0.0	-0.2
59.6	59.7	59.8	-0.1	-0.2	20.0	20.1	19.3	-0.1	+0.7
101.7	102.0	99.7	-0.3	+2.0	31.1	31.0	29.4	+0.1	+1.7
119.5	130.2	114.5	-10.7	+5.0	50.0	55.8	48.1	-5.8	+1.9

NOTE: Prepared by the Arizona Department of Economic Security, Research Administration, in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Nonmetropolitan Counties
Labor Force and Employment
June 1989

	Apache	Cochise	Coco-nino	Gila	Graham	Green-lee	La Paz
CIVILIAN LABOR FORCE*	13,750	36,075	42,225	12,975	8,950	2,975	6,250
Total Unemployment	2,775	2,450	3,450	1,150	750	275	375
Rate	20.2%	6.8%	8.2%	8.9%	8.4%	9.2%	6.0%
Rate (Seas. Adj.)**	14.8%	6.5%	6.8%	8.8%	7.9%	9.2%	7.2%
Total Employment	10,975	33,625	38,775	11,825	8,200	2,700	5,875

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY	13,600	24,900	36,850	10,725	5,350	2,775	3,650
Manufacturing	925	1,250	3,100	1,375	200	50	325
Mining & Quarrying	50	125	150	1,300	0	1,550	75
Construction	975	875	1,825	550	225	175	225
T.C.P.U.	1,700	1,525	2,125	375	150	50	75
Trade	1,650	5,850	9,775	2,175	1,500	225	1,225
F.I.R.E.	350	675	925	275	100	25	100
Services & Misc.	4,375	4,825	11,250	2,100	900	150	925
Government	3,575	9,775	7,700	2,575	2,275	550	700

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	33,350	25,900	39,600	11,425	38,850	52,525
Total Unemployment	1,650	3,600	3,150	1,625	1,950	11,075
Rate	4.9%	13.9%	8.0%	14.2%	5.0%	21.1%
Rate (Seas. Adj.)**	5.1%	11.3%	7.2%	12.5%	5.0%	14.6%
Total Employment	31,700	22,300	36,450	9,800	36,900	41,450

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY	22,325	19,250	29,550	9,800	25,350	26,500
Manufacturing	2,675	2,075	4,175	1,275	2,350	2,075
Mining & Quarrying	175	1,175	3,650	0	850	50
Construction	1,775	1,100	1,400	350	2,175	1,450
T.C.P.U.	1,175	1,775	950	575	975	1,050
Trade	7,050	4,225	5,375	3,950	7,375	7,975
F.I.R.E.	1,025	400	775	275	1,000	975
Services & Misc.	5,450	5,000	4,000	1,600	6,025	5,975
Government	3,000	3,500	9,225	1,775	4,600	6,950

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.
** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of labor Statistics.

Estimated Hours and Earnings of Production Workers in Selected Industries Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	June* 1989	May 1989	June 1988	June* 1989	May 1989	June 1988	June* 1989	May 1989	June 1988
Manufacturing	406.72	404.33	406.64	41.0	40.8	41.2	9.92	9.91	9.87
Aircraft & Missiles	593.62	591.91	INA	44.3	43.3	INA	13.40	13.67	INA
Food & Kindred Prod.	330.77	341.25	343.48	39.9	40.1	39.3	8.29	8.57	8.74
Primary Metals	512.45	511.43	497.80	38.1	39.1	38.8	13.45	13.08	12.83
Machinery	393.62	400.36	410.85	39.6	40.4	41.5	9.94	9.91	9.90
Copper Mining	563.99	558.95	503.48	44.2	43.6	41.1	12.76	12.82	12.25
Construction	429.68	422.18	428.95	36.6	35.9	36.6	11.74	11.76	11.72
Utilities	674.59	667.89	633.74	41.9	40.7	43.2	16.10	16.41	14.67
Retail Trade**	250.92	249.24	249.50	33.5	33.1	33.4	7.49	7.53	7.47
Wholesale Trade	371.72	371.70	394.71	38.6	38.8	40.4	9.63	9.58	9.77

Estimated Hours and Earnings of Production Workers in Selected Industries Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	June* 1989	May 1989	June 1988	June* 1989	May 1989	June 1988	June* 1989	May 1989	June 1988
Manufacturing	361.57	360.99	429.73	37.9	37.8	41.6	9.54	9.55	10.33
Construction	583.14	589.81	443.17	43.1	43.4	36.9	13.53	13.59	12.01
Retail Trade**	390.82	389.39	274.16	36.8	36.7	34.1	10.62	10.61	8.04
Wholesale Trade	588.76	578.69	417.13	41.0	41.1	41.3	14.36	14.08	10.10

Estimated Hours and Earnings of Production Workers in Selected Industries Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	June* 1989	May 1989	June 1988	June* 1989	May 1989	June 1988	June* 1989	May 1989	June 1988
Manufacturing	426.21	421.83	383.67	41.1	40.6	39.8	10.37	10.39	9.64
Copper Mining	449.55	438.26	531.30	37.4	36.4	42.2	12.02	12.04	12.59
Construction	265.05	264.18	382.28	34.2	34.0	36.9	7.75	7.77	10.36
Utilities	388.05	393.42	577.55	39.0	39.5	41.7	9.95	9.96	13.85

* Preliminary.

** Excludes eating and drinking places.

Note: These estimates are based on a sample of full- and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs June 1989

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,729,033	1,630,437	98,596	5.7%
Apache	13,738	10,974	2,764	20.1
Cochise	36,071	33,626	2,445	6.8
Coconino	42,227	38,767	3,460	8.2
Gila	12,971	11,819	1,152	8.9
Graham	8,927	8,189	738	8.3
Greenlee	2,967	2,702	265	8.9
La Paz	6,239	5,867	372	6.0
Maricopa	1,078,001	1,029,295	48,706	4.5
Mohave	33,344	31,689	1,655	5.0
Navajo	25,896	22,299	3,597	13.9
Pima	326,233	310,601	15,632	4.8
Pinal	39,610	36,448	3,162	8.0
Santa Cruz	11,424	9,804	1,620	14.2
Yavapai	38,858	36,912	1,946	5.0
Yuma	52,527	41,444	11,083	21.1

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

The Arizona Labor Force in June

(Continued from page 9)
trade deficit for June suggest that growth in this sector will be further delayed. Also, the aircraft and missiles sector, which contains defense-related producers, experienced a similar loss of 300.

On the plus side, employment in the lumber and wood products sector rose during May and June, leading to a total of 8,700 jobs. The nondurable sector had employment growth of 300 in June with most of the activity coming from food and kindred products.

Transportation, Communications, and Public Utilities (TCPU) added 200 in June. The transportation sector, however, added 300 jobs while the public utilities sector lost 100 jobs. Over the year, the transportation sector has added 1,300 jobs (3.6 percent growth); public utilities has lost 800 (-2.2 percent growth). Reductions in this sector are the result of slower migration to the state.

Finance, Insurance, and Real Estate (FIRE) did not contribute in June as it did in May. Instead, FIRE registered a loss of 300, translating to a 1.9 percent decline over June of last year. The outlook for this industry remains depressed with little likelihood for improvement for many months.

Activity in June should be interpreted cautiously. Seasonal summer activity influenced total wage and salary employment data.

--Jalal Ahmad
Economist

'89 Version of MICRO OIS Data Base is Released

The Arizona State Occupational Information Coordinating Committee (ASOICC) has released the 1989 version of the MICRO OIS (Occupational Information System). A statewide microcomputer data base, the MICRO OIS offers a wide variety of occupational information to vocational planners, career counselors, educators and students.

This year's version of the MICRO OIS has several new modules -- 17 in all -- and several more are planned for next year. Among some of the current modules' features are: printouts of 750 occupations with an option of an accompanying supply/demand report for each occupation, a job-match process that allows individuals to give their skills and education objectives to determine possible occupations, and a listing of schools when a specific area and type of training are requested.

The MICRO OIS, which is installed at more than 60 sites in Arizona, is designed as a stand-alone system that runs on an IBM-compatible microcomputer. The basic MICRO OIS system requires 13 megabytes of memory, with more than 40 megabytes needed for full implementation of the data base.

The MICRO OIS, developed and overseen by OIS Manager Hugo Soll, Ph.D., is available at no cost to secondary schools and nonprofit organizations in Arizona. Installation of the data base is available through ASOICC.

Besides the MICRO OIS, there are two other components of Arizona's OIS program. The *OIS Users' Manual* is a valuable resource for vocational training, career counseling, and vocational evaluation. And used with either the MICRO OIS or the *OIS User's Manual* are a series of printed reports that present supply-demand data and other information.

Development and implementation of OIS is mandated by the Job Training Partnership Act and the Carl Perkins Vocational Education Act. Arizona's OIS program has been funded by the state Department of Education as well as DES, Research Administration.

More information on MICRO OIS and the OIS program is available by writing: Hugo H. Soll, Ph.D., Manager, OIS of Arizona, P.O. Box 6123, Phoenix, AZ 85005; or calling (602) 542-3860.

LMI Publications -- Hot Off the Press

The following revised publications prepared by DES, Research Administration, can be ordered by writing to the address on the back of this newsletter or by calling (602) 542-3871. One copy of each publication will be sent at no charge. Multiple copies are available at a nominal charge. DES offices can order directly from DES Supply.

Affirmative Action Planning Information (PAL-345 and PAL-346) are two publications prepared annually that contain 1988 estimates of population and labor force characteristics by sex, race, and Hispanic ethnicity. Another feature of the publication is a table showing the number of Job Service applicants in 1988 by occupational category. One publication (PAL-345) has data for Arizona, the state's metropolitan counties (Maricopa and Pima), and the major cities within those counties. The other publication (PAL-346) includes data for the state's nonmetropolitan counties.

New Developments

"New Developments" is featured each month as a service to our readers. This section is a compilation of public announcements and articles from newspapers and periodicals about events significant to Arizona labor markets. Due to space limitations, however, an exhaustive list of business news is not possible. In addition, the LMI Newsletter is not responsible for incorrect information reported by these sources.

MANUFACTURING - The city of Eloy and Pinal County received a boost from a new ceramic tile maker that plans to build a 220,000-square-foot plant which is expected to initially hire 250 people and eventually employ 700. **CeramaTile Corp.**, which incorporated in Arizona in late June, is expected to bring annual salaries and benefits worth $3.85 million and $275,000 in taxes for Eloy when the factory begins operation in May 1991. The company selected a 200-acre site near I-10 and Arizona 87 because of its proximity to two interstate highways (I-10 and I-8) and a railroad line.

Although it isn't expected to translate into additional jobs, a $200 million contract with the Army should stabilize employment (currently 3,200) at **McDonnell Douglas Helicopter Co.** in Mesa. The agreement calls for McDonnell Douglas to develop an advanced version of the Apache attack helicopter featuring new radar systems and more powerful engines, with production beginning in 1993. The Army deal would help offset the possible end of regular production of the Apaches for the U.S. government in the early 1990s.

MINING - **Phelps Dodge Corp.** plans to expand its Morenci copper mine operation over the next two years, creating 240 jobs. The $112 million expansion is expected to bring the mine's annual production to 140 million pounds and increase employment to 1,900 workers.

Workers at **Magma Cooper Co.** learned in July there won't be any early Christmas bonuses. The 3,200 workers at the San Manuel and Miami mines fell short of a production quota that would have netted an additional $9 million in wages, even though the mines' second-quarter profits increased $13 million.

CONSTRUCTION - Phoenix residents will vote October 3 on a proposition to decide if the city will finance up to $100 million of construction for a **multi-purpose or baseball-only stadium.** The city is negotiating with two parties -- a Chicago developer and Phoenix Cardinals owner Bill Bidwell -- to build a stadium for football and baseball, in which the developer will pay for about two-thirds of the $200 million cost. If negotiations fall through and voters approve the proposition, the city would solely fund the building of a baseball-only stadium.

One major government contract was awarded in July and another is expected to be approved in late August. The city of Phoenix OK'd a $47 million deal last month with PCL/Westbrook Construction Services Inc. to build **concourses at Sky Harbor International Airport's fourth terminal**, currently under construction. Tucson, meanwhile, is preparing to award a $69 million contract to Clearwater Construction of Austin, Texas, which was low bidder on the city's first **water treatment plant.**

It may be a while before construction on homes and office buildings picks up in the metropolitan Phoenix area if recently released figures do not improve. According to the **Home Builders Association of Central Ari-**

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zona, single-family and multi-family permits were down 38 percent in the first half of 1989 from last year's figures. In addition, one-fourth of the Valley's office space is vacant, and it is expected to take five years to fill the space, according to **CBS Property**, which based its estimate on absorption rates over the past two-and-one-half years.

Plaza del Rio Development of Peoria has sold two acres to Kitchell Development of Phoenix to build the **Thunderbird Professional Building.** Construction of the 25,000-square-foot commercial and office building near Sun City was expected to begin in August with a target date for completion of February 1990.

TRADE - Darien, Conn.-based **Executone Information Systems**, which manufactures and sells voice and data business-communications equipment, has laid off 30 of 150 employees at its Scottsdale office. The move is part of the company's restructuring plan, which also calls for dropping plans for a national service center in Scottsdale, expected to employ 50 people.

The supermarket wars in Arizona continue unabated. **Bashas'** recently opened three more stores, bringing the Chandler-based chain's total to 53. The newest additions are a 26,000-square-foot full-service outlet in Holbrook; a 44,000-square-foot store and its fifth on the Navajo reservation; and its first store in California, across the Colorado River in Needles. ... It was recently announced an **Albertson's Superstore** will be the major tenant in the Bell Canyon Pavillions shopping center, located at the northwestern corner of Bell Road and Interstate 17. The Idaho-based chain's store will occupy 63,000 square feet of the 366,000-square-foot center, which is currently under construction. ... **First Interstate Bank of Arizona** and **Smith's Food & Drug** have agreed on a plan for the bank to open full-service branches at most of the new Smith's stores in the state. Smith's currently has eight stores under construction in the Phoenix metropolitan area and eight other stores open or under construction in Tucson, Flagstaff, Prescott and Case Grande.

Tempe-based **Worldwide Business Systems Inc.** went out of business in mid-July. The 11-year-old copy-machine dealer, whose clients included Motorola, Luke Air Force Base and state and federal agencies, was unable to sell its business to a prospective Ohio investor. There is no information on how many people Worldwide employed.

The home-improvement store competition in the Valley continues at a fast pace. Fullerton, Calif.-based **HomeClub Inc.** has opened its second store in metropolitan Phoenix, a 100,000-square-foot facility at 3223 W. Indian School Road, which is expected to employ 100 people. HomeClub plans to operate five stores in the Phoenix area, including one in Mesa this fall. ... **Home Depot** has closed escrow on its eighth Valley location, a 100,000-square-foot store on 10 acres at Superstition Springs in Mesa. ... **The Price Club** has decided to keep its Mesa store, which generates an estimated $1 million in taxes for the city of Mesa, for at least five years. The store at 1720 E. Broadway was to have closed when a new location in Tempe opens, but city of Mesa officials convinced the San Diego-based retail chain to stay in return for water-drainage improvements at the site.

Several new or remodeled shopping centers are having success in leasing space. As a $150 million renovation nears completion, **Scottsdale Fashion Square** has announced 21 new tenants -- including The Disney

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Store -- have signed up and the renewal of leases for existing merchants. ... Scheduled to open in the fall, **Glendale Galleria**, a 200,000-square-foot shopping center at 59th and Peoria avenues, is 86 percent preleased, developers say. ... **Uptown Plaza**, which has undergone a $2 million facelift and expansion that includes a Parisian-style shopping street, is 95 percent leased in its older portion and will have 17 small shops in 23,000 square feet of new space. Phoenix' oldest shopping center, Uptown Plaza is located at Central Avenue and Camelback Road. ... Work is under way on the **Scottsdale Galleria**, a $123 million speciality-store center on Scottsdale Road just south of Camelback. The three-story retail center, scheduled to open in late 1990, will feature 245 shops and 1.35 million square feet of shopping and entertainment space.

FINANCE, INSURANCE and REAL ESTATE - For the first quarter of 1989, **net income of Arizona's banks** fell 66 percent from the previous quarter, to $12 million. Annual return on average assets for the quarter was 0.17 percent, second lowest among all states, only ahead of beleaguered Texas.

Arizona's largest savings and loan, **MeraBank**, has let go 160 loan officers and stopped making loans in an attempt to offset losses of $200 million in 1988 and $29 million in the first quarter of '89, which are blamed on a weak real estate market. MeraBank, a subsidiary of Pinnacle West Corp., will reduce its assets from $8 million to $5 million in the next five years by selling off subsidiaries and repossessed property. The streamlining plan will leave MeraBank with 1,700 employees, 27 percent fewer than before the recent layoffs.

Despite problems in Arizona's finance industry, two institutions are forging ahead. Arizona's fastest growing bank, **The Bank of Fountain Hills**, has changed names and picked up two Scottsdale offices when it took over Fidelity Bank of Scottsdale, which failed in July. Now know as **Fountain Hills Bank**, the institution has grown from $5 million to $15 million in deposits and has 18 employees. In May, Fountain Hills took over Grand Canyon State Bank, which also failed. ... **PriMerit Bank**, a savings bank based in Las Vegas, Nev., has opened its third and fourth branches in metropolitan Phoenix -- one each in Mesa and Sun City West -- with a fifth branch planned for Mesa by the end of the year. PriMerit has $2.7 billion in assets and $120 million in Arizona deposits.

Del Webb Corp. of Phoenix has tentatively selected a 5,700-acre site in northern Maricopa County for its third Valley retirement community. Del Webb, which developed Sun City and Sun City West in the northwest Valley and also is building retirement communities in Tucson and Las Vegas, has entered a joint agreement with **Lakeview City Inc.** to build an adult retirement area on land three miles north and east of Carefree Highway and Interstate 17.

SERVICES AND MISCELLANEOUS - In an ironic twist, a group planning a $160 million war museum has chosen as its site a 300-acre ranch once owned by John Wayne. **The Institute for the Study of American Wars** selected the historic Red River Ranch on Maricopa Road, 12 miles northwest of Casa Grande in Pinal County, as the home of the museum, which will have exhibitions on all major U.S. wars. Although the institute had only raised $60,000 by early July, the group expects a national fund-raising effort will bring in the needed $70 million for the museum's first phase. Previously, a site in

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Oklahoma was chosen for the museum, but a dispute over the donation of land caused the institute to change its mind.

Phoenix is one of nine western cities being considered by **Security Pacific Corp.**, parent company of Security Pacific Bank, Arizona, for its consolidated credit card center. The center, which will service 1.5 million accounts, would combine operations from Phoenix, Los Angeles, Portland and Seattle and employ up to 800 workers.

Phoenix-based **El Pollo Asado Inc.**, a fast-food chain that specializes in charbroiled chicken, is experiencing tough times and may try to restructure its loans or shut down its operation if a promotion of its new Mexican cafes fails. El Pollo Asado, which is converting its restaurants into Mexican cafes, owns nine cafes and franchises 16 others. El Pollo Asado posted small profits in 1986 and '87, but lost $7.7 million in '88 and expects losses this year.

Plans for a new Valley resort community, centering around a 250-room hotel, were announced in July. **Pinnacle Peak Partners** is expected to develop an 1,800-acre resort in north Scottsdale, which will include 140 private homes; a Four Seasons hotel featuring two restaurants, a health club and sports complex; and two 18-hole golf courses. The hotel, which will cost $87 million to build, is expected to be completed by fall 1990.

Due to high occupancy, **Westcourt in the Buttes** is spending $8 million to expand and renovate the 300-room resort in Tempe near Interstate 10 and Broadway Road. Plans call for an additional 55 rooms and suites, a 375-space parking garage, enlarging of a restaurant, and renovation of an exhibition hall.

One of the largest franchise hair salons, **Hair Performers**, plans to double its operation in the Phoenix area in the next 18 months -- from 10 to 20 stores.

Two major accounting companies that will merge plan to have one location for their Arizona operation in Phoenix, although no sight has been selected. **Ernest and Whinney** of Cleveland and **Arthur Young & Co.** of New York will have a total of 210 employees when the offices are joined.

GENERAL - Recent reports show state and local government trade offices in Taiwan are beginning to pay off in sales to Pacific Rim businesses. The **Arizona Department of Commerce** and the city of **Tucson's Economic Development Office** operate trade offices in the World Trade Center in Taipei, Taiwan. In its second year, Tucson's office has helped generate about $200,000 in local sales -- from pecans to laser measuring devices. The Department of Commerce, which opened an office in 1987, participated in a U.S. Products Show in June and forwarded 763 leads for Arizona companies. One company, American Export, has received orders worth $60,000 to $70,000 from contacts made at the trade show.

VOCATIONAL EDUCATION -- The **Juvenile Behavioral Training Center**, 2457 E. Broadway Road, has received a $50,000 grant from the county Board of Supervisors to provide counseling and employment training to troubled youth in south Phoenix. The center, which could receive an additional $52,000 later this year, is part of the non-profit East Valley Youth and Family Support Centers Inc. in Mesa, which provides behavioral health services.

Forecast Update in September Issue

In next month's Arizona LMI Newsletter, Research Administration updates its annual employment forecast, which came out in March. Articles will focus on the state as a whole, Maricopa and Pima counties, and nonmetropolitan counties.

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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XIII No. 9
September 1989

Unemployment Rate

Seasonally Adjusted
July*

ARIZONA	5.6%
Maricopa County	4.6%
Pima County	4.7%
UNITED STATES	5.2%

Consumer Price Index

U.S. - July 1989
Base = 1982-84

Wage Earner/Clerical Worker	123.2
% Chg. Year Ago	5.1
All Urban	124.4
% Chg. Year Ago	5.0

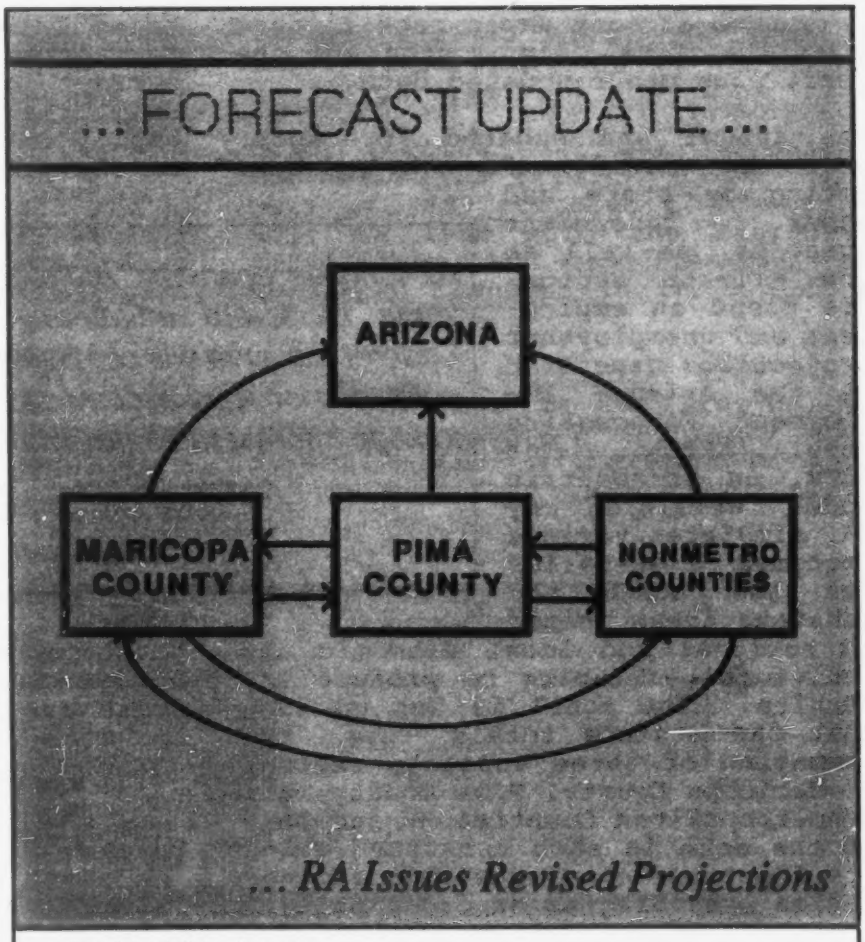
Phoenix - 2nd Qtr 1989
Base = 1982-84

All Urban	125.9
% Chg. Year Ago	5.0

Tucson - 2nd Qtr 1989
Base = 1982-84

All Urban	125.3
% Chg. Year Ago	4.6

* Preliminary



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Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

Inflation to Control Fate of State's Economy

... FORECAST UPDATE ...

Each July, the Arizona Department of Economic Security (DES), Research Administration (RA), updates its annual two-year wage and salary employment forecast, which is published in the March issue of the *Arizona LMI Newsletter*. The revised projections, which are included in the newsletter's September issue, take into account employment figures from the first six months of the year, plus other updated data.

The annual and updated forecasts, which are used for planning and budgeting by state and other government agencies, as well as the private sector, are based on employment and unemployment projections generated by the Arizona Employment Forecasting Model (AEFM). The AEFM, an econometric model developed by RA, simulates various economic scenarios for the state and substate areas based on national and local economic and behavioral variables to produce its results. The model is set up such that the state's totals are the summation of three substate regions -- Maricopa County, Pima County, and Nonmetropolitan Counties -- and some of the data in each substate region are functions of data within another region (see diagram on front page).

As long as economic indicators show moderate inflation, the Federal Reserve will continue its policy of monetary accomodation to keep interest rates from rising.

--Jalal Ahmad, Ph.D.
RA Economist

At the beginning of the year, RA updates the AEFM with revised (benchmarked) employment and unemployment data from the previous two years. Then, economic assumptions and key variables (see below) about the expected performance of the national and state economy are factored into the AEFM's 250 equations to arrive at projections for the current and following years. In July, the AEFM is again updated with employment data from the first half of the year, and revised forecasts for the current and following years are issued.

Following is an overview of the key variables and economic assumptions used to arrive at this year's updated AEFM projections. Then, in separate articles, RA analyzes Arizona's and the state's three major sectors' economic performance for the first six months of 1989 and how the state and substate areas are expected to perform the next 18 months.

KEY VARIABLES AND ASSUMPTIONS

The key to the nation's as well as the state's economy is the rate of inflation in the near term. If inflation continues to moderate in the near term, then job growth will continue, but remain modest.

Currently, the Federal Reserve Bank is more concerned about avoiding a recession, which would result in higher unemployment rather than higher inflation. As long as economic indicators show moderate inflation, the Federal Reserve will continue its policy of monetary ac-

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Brent Fine, Editor
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Doldrums in Manufacturing, Construction Slow Arizona's Growth First Half of Year

Preliminary figures for the first six months of 1989 reveal that Arizona's economy continued to expand, but at a modest rate. And data from the updated Arizona Employment Forecasting Model (AEFM) show that slow growth is expected to continue the remainder of the 1989 and well into next year.

Looking back at the first six months of 1989, payroll employment in Arizona grew at a negligible rate of 1.3 percent, while the national economy experienced job growth of 3.1 percent. However, the gap between growth rates should disappear as the U.S. economy slows and the Arizona economy eventually comes out of the construction and manufacturing doldrums.

... FORECAST UPDATE ...

Despite slower payroll job growth, residence-based employment improved substantially in the first six months of 1989 compared to first six months of 1988. Residence-based employment registered growth of 5.1 percent along with a 4.4 percent increase in the labor force. In 1988, residence-based employment and the labor force each only grew at rates of 2.6 percent.

Major factors that are responsible for weak job growth in the first half of 1989 compared to the first half of 1988 were the lackluster performance of manufacturing and continued downturn in the construction.

Manufacturing employment grew a meager 0.2 percent in the first half of 1989. The state's machinery manufacturing and aircraft and missiles

(Continued on page 4)

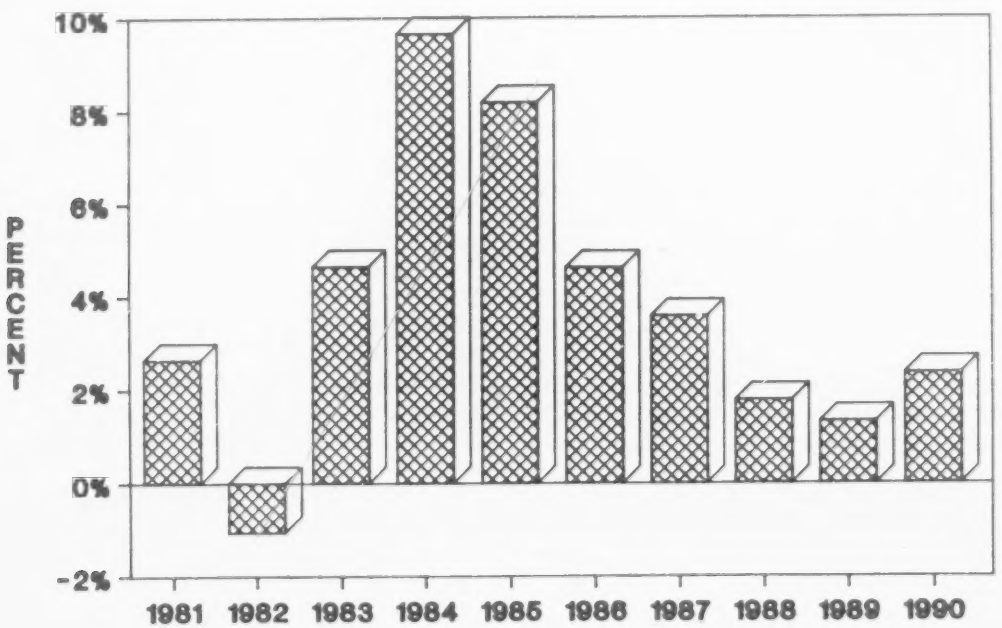

Figure 1. Arizona Wage and Salary Employment Growth Rates, 1981-1990

Table 1. Arizona Economic Forecasts (Annual Averages, in Thousands)

	1988	Growth Rate	1989	Growth Rate	1990	Growth Rate
Labor Force	1,654.0	2.6%	1,720.0	4.0%	1,778.5	3.4%
Unemployed	104.0	3.0	100.5	-3.4	113.8	13.2
Unemployment Rate	6.3%		5.8%		6.4%	
Total Employment	1,550.0	2.6	1,619.5	4.5	1,664.7	2.8
Total Wage and Salary Employment	1,410.6	1.8	1,429.4	1.3	1,463.3	2.4
Manufacturing	189.9	1.3	189.8	-0.1	193.1	1.7
Mining	12.0	5.3	12.1	0.8	12.4	2.5
Construction	93.9	-9.0	89.9	-4.3	90.8	1.0
TCPU*	72.7	1.4	72.6	-0.1	74.0	1.9
Trade	347.5	2.1	357.8	3.0	365.8	2.2
FIRE**	93.3	-1.3	91.7	-1.7	93.5	2.0
Services	361.2	4.6	370.0	2.4	383.1	3.5
Government	240.3	3.6	245.6	2.2	250.8	2.1

* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

NOTES: Totals may not add due to rounding.

SOURCE: Arizona Department of Economic Security, Research Administration, August 1989.

(Continued from page 3)
manufacturing industries cut their employment in the first half of the year. Employment in the construction industry fell 3.9 percent during this same period.

Other industries that performed poorly in the first half of 1989 were finance, insurance, and real estate (FIRE); and transportation, communications, and public utilities (TCPU). Employment in FIRE declined 1.7 percent in the first six months, while TCPU experienced negative job growth (-0.5 percent).

Industries that added jobs in the state's private sector were trade (3.2 percent), mining (2.1 percent) and services (1.7 percent). Negative job growth in business services (-1.5 percent) was responsible for weaker-than-normal growth in services.

Based on AEFM results, RA expects modest growth in inflation and employment for the remainder of this year and well into 1990. Overall, RA forecasts payroll employment in Arizona to grow only 1.3 percent in 1989, followed by a little higher growth -- 2.4 percent -- in 1990.

The reason for the sluggish growth continues to be the lackluster performance of manufacturing, still depressed construction employment, and slower in-migration.

Recently, some encouraging signs were noted in construction. With mortgage rates trending downward and the subsequent increased demand for single-family housing, the employment outlook should slowly improve. However, employment for industrial and retail construction should remain soft unless the rate of absorption of existing office space increases. Overall, construction employment is forecast to decline 4.3 percent in 1989 and increase moderately -- by 1.0 percent -- in 1990.

Employment in manufacturing will be hampered by the state's negative job

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growth in the machinery and defense-related sectors. Given the weak response of the machinery sector to the fall in the dollar's value and the federal budget deficit, RA expects these sectors to reduce employment in 1989, then show a slight improvement the following year. Overall, manufacturing employment is expected to fall one-tenth of a percent in 1989, followed by an increase of 1.7 percent in 1990.

FIRE employment should continue to decline the remainder of the year with most of the losses coming from the finance industry. RA forecasts FIRE employment to decline 1.7 percent in 1989, followed by an increase of 2.0 percent in 1990.

TCPU is expected to have its overall employment base shrink by 100 jobs in 1989, fueled by a loss of 600 jobs in the public utilities in 1989. FIRE employment is expected to rebound in 1990, however, with an increase of 1.9 percent.

On the positive side, the services and trade industries will create most of the new jobs. But growth in these areas should be moderate.

RA forecasts trade to only grow 3.0 percent, followed by services with a 2.4 percent growth rate. The largest gains in these two industries should be in hotels and lodging places, automotive services, food stores, and eating and drinking places.

Overall, RA forecasts Arizona's payroll employment to grow 1.3 percent in 1989 (18,800 jobs) and 2.4 percent (33,900 jobs) in 1990. At the substate level in 1989, Maricopa County should grow 1.1 percent (10,100 jobs); Pima County, 1.0 percent (2,400 jobs); and Nonmetropolitan Counties, 2.7 percent (6,300 jobs). In 1990, Maricopa County is expected to grow 2.3 percent (22,000 jobs); Pima County, 2.2 percent (5,500 jobs), and Nonmetropolitan Counties, 2.7 percent (6,400 jobs).

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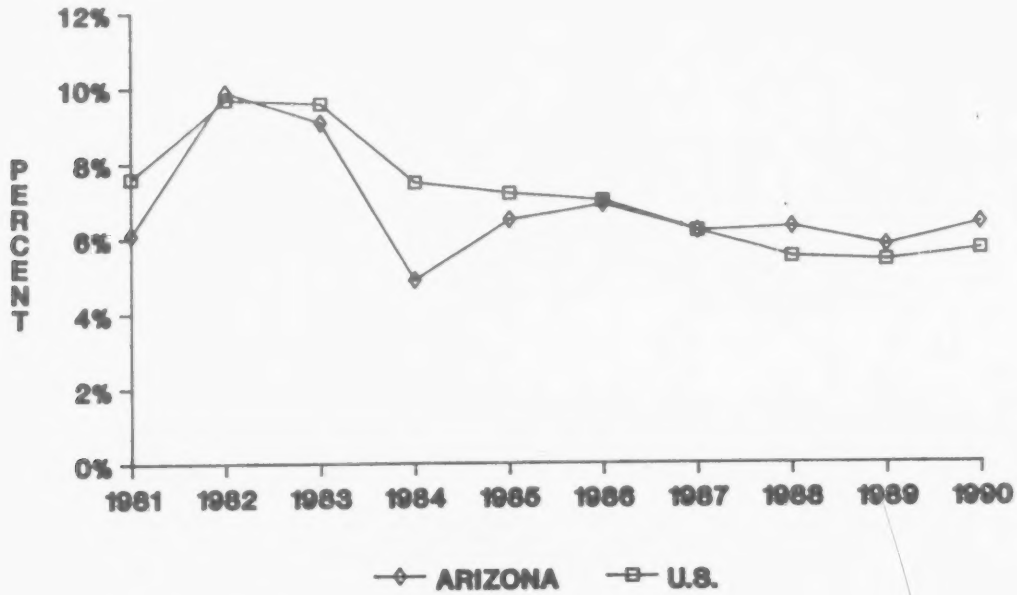

Figure 2. Arizona vs. U.S. Unemployment Rates, 1981-1990

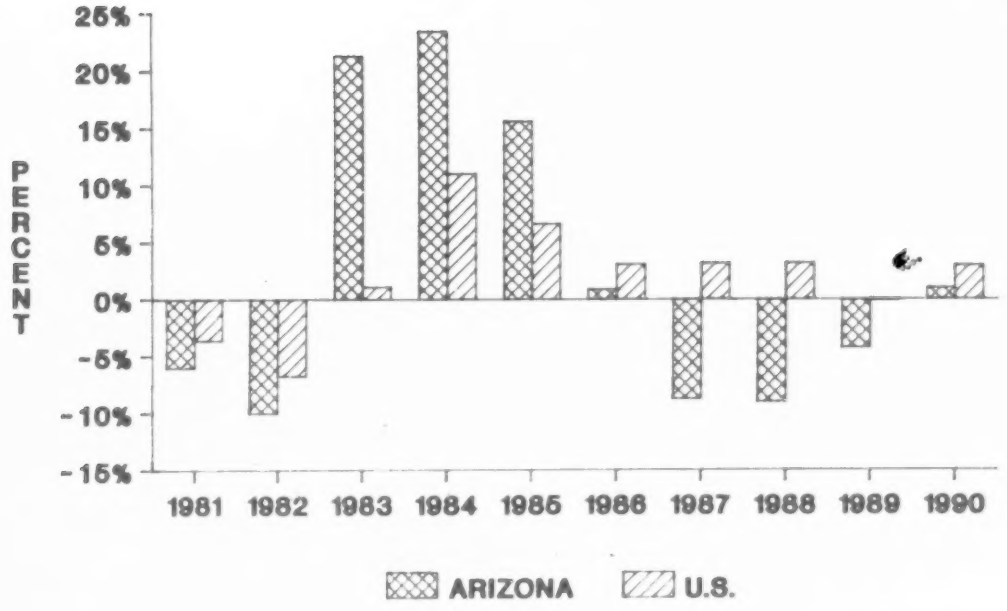

Figure 3. Arizona vs. U.S. Construction Employment Growth Rates, 1981-1990

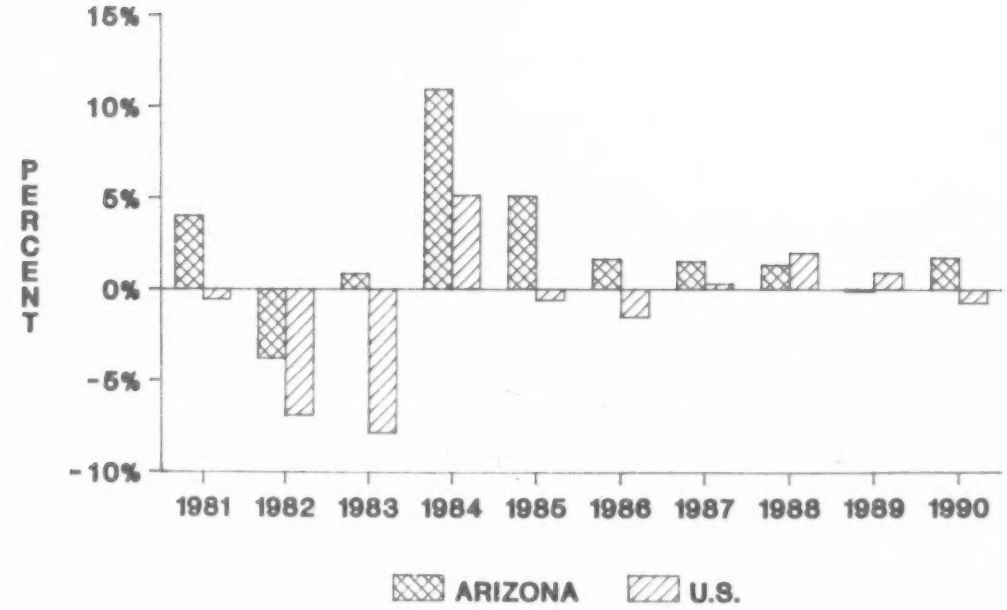

Figure 4. Arizona vs. U.S. Manufacturing Employment Growth Rates, 1981-1990

Inflation Plays Key Role in Fate of State's Economy

(Continued from page 2)
commodation to keep interest rates from rising. If inflation picks up, however, then the Federal Reserve would be compelled to reverse its easing of monetary policy, resulting in a slowdown in job growth. RA's forecast assumes inflation to moderate the remainder of this year and next year. Inflation, as measured by changes in the U.S. Consumer Price Index (CPI), will increase 4.9 percent in 1989 and 3.9 percent in 1990. In July, the over-the-year CPI for all urban consumers was 5.0 percent.

In Arizona, moderate growth in inflation should allow interest rates -- especially mortgage rates -- to come down to single-digit levels, which in turn should have a positive impact on the state's housing market. Also, moderate growth in inflation should boost consumer confidence and spending. Alternatively, higher inflation in the near term will further deteriorate the state's already depressed housing market.

Other key variables that will influence the national and state economies are the price of oil, value of the dollar, taxes, and government spending.

The outlook for oil prices has not changed significantly, but slower economic growth, plus high OPEC (Organization of Petroleum Exporting Countries) and non-OPEC production should push oil prices down in the near future. Refiners' acquisition cost of crude oil is expected to decline from about a $19 per-barrel average in the second quarter of 1989 to a $16.50 per-barrel average the second half of 1989 and $15.20 per-barrel annual average in 1990.

The value of the dollar against other currencies will largely depend on the monetary policy of the Fed and the U.S. trade position. As measured by the index of 40 trade-weighted currencies, the dollar's value is expected to fall about 3.0 percent in the second half of 1989 and another 4.0 percent in 1990. (It is important to note that the Arizona semiconductor-goods producers have not responded in expanding their employment base to the fall in the value of the dollar over the last few years.)

The outlook for federal government spending is basically unchanged for 1989 and 1990 with real defense purchases continuing to fall. The cutback in purchases has significantly impacted defense-related producers in Arizona in recent months. Finally, real U.S. Gross National Product (GNP) should grow 2.6 percent in 1989 and 2.4 percent in 1990.

Arizona Growth to Remain Sluggish Through '90

(Continued from page 5)
Finally, the state's unemployment rate should average 5.8 percent in 1989 with annual-average, residence-based employment growth of 5.0 percent and labor force growth of 4.0 percent. The unemployment rate, however, is expected to rise moderately to 6.4 percent in 1990 as more residents, who previously had given up looking for work, begin searching for jobs as the economy expands.

--Jalal Ahmad, Ph.D.
RA Economist

Maricopa County Falling Short of Modest Forecast; Slight Improvement Seen for '90

In March, DES, Research Administration (RA), said 1989 was going to be a year of slow growth for Maricopa County. With half the year now behind us, it appears 1989 growth will be even slower than RA expected.

RA now forecasts a wage and salary employment growth rate of 1.1 percent in 1989 -- down from the 1.7 percent prediction in March. That translates into only 10,100 new jobs being created this year.

Despite slower job growth, residence-based total employment will grow 4.2 percent and the labor force will expand 3.8 percent. Both of these rates are slightly greater than RA forecast in March. The total unemployed will decrease 2,700, and the unemployment rate will average only 4.8 percent, rather than the 5.4 percent predicted in March.

Next year, there will be gradual improvement in the economy as long as inflation does not rise too quickly, or too high. Currently, the Federal Reserve is more concerned with the potential for recession rather than inflation. (See "Inflation Expected to Control Fate of State's Economy," p. 2.)

Maricopa County wage and salary employment growth in 1990 will average 2.3 percent. That is still slow growth, but twice the rate of 1989.

Employment effects from FSLIC seizures will occur mostly in the finance industry, but there will be some ripple effects through the real estate and construction industries.

--Ron Simon
RA Economic Analysis Manager

... FORECAST UPDATE ...

The construction industry has been the chief cause of slow growth during 1989, as it was in 1988 and 1987. This year, construction employment will decline 5.4 percent, or about 3,500 jobs, on an annual-average basis.

So, while construction is still losing jobs, at least the rate of decline -- 7.6 percent in 1988 -- is getting smaller. In fact, most of the loss has already occurred, and there has been a modest upward trend in May, June, and July.

RA expects continued improvement in construction (with the exception of some fall/winter seasonal loss) into 1990. There will be enough improvement to register growth of 500 jobs, or 0.8 percent, over the year.

The problems with construction have brought related losses in the finance, insurance, and real estate (FIRE) industry.

About 600 jobs were lost in FIRE in 1988, and 1,100 more will be lost in 1989. But in 1990, 1,400 of those jobs will be won back, thanks to lower interest rates.

Reduced interest rates generate more employment in the finance and real estate sectors due to increased buying activity, and additionally, more in finance as present home owners refinance to take advantage of the lower rates.

Because there have been large numbers of bankruptcies and several

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Federal Savings and Loan Insurance Corp. (FSLIC) seizures of major savings and loan institutions in Phoenix during the last year, many managers are asking how the local economy will be affected. The answer to that question is neither easy nor certain.

What happens will depend a lot on the actions of FSLIC administrators. Some of the employment losses forecast for the finance industry in 1989 are the result of savings and loan failures, but most are from the paring of inflated staffs, after an expansion in response to deregulation of the industry.

Employment effects from FSLIC seizures will occur mostly in the finance industry, but there will be some ripple effects through the real estate and construction industries. If the FSLIC administrators attempt to quickly liquidate the assets of the seized institutions, there may be more employment in the short term for real estate agents, but property values might fall precipitously, further damaging the institutions the FSLIC is trying to shore up.

Also, with fewer financial institutions and more conservative lending practices by the chastened that remain, there will be less investment capital to put into construction projects. Diminished investment capital would at the very least retard construction expansion, even if it did not cause a further downturn in the industry.

Another reason there is slow overall growth is that Phoenix-area manufacturing industries have not been sharing in the growth experienced in other parts of the nation.

RA's projection for manufacturing in 1989 is that it will grow only one-half of a percent, or by 700 jobs. Most of that growth will come in the

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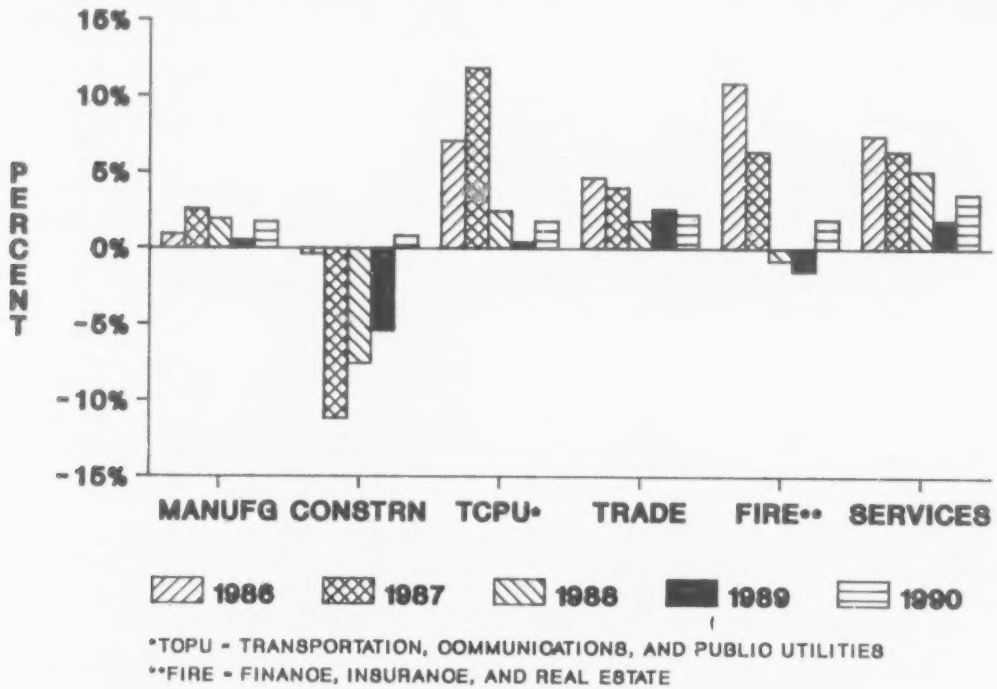

Figure 5. Maricopa County Employment Growth Rates in Selected Industries, 1981-1990